

DATE: November 17, 1997

DSL-BQA-97-047

TO: Community Based Residential Facilities

CBRF 18

FROM: Judy Fryback, Director
Bureau of Quality Assurance

Water Temperatures

This memorandum serves to alert you to the dangers of hot water temperatures and to remind you of the HFS 83 requirements for water temperatures.

Section HFS 83.41(5)(d)2., Wisconsin Administrative Code, states: "The temperature of water at fixtures in showers and tubs used by residents shall be automatically regulated by valves and may not exceed 110 degrees Fahrenheit, except for Community Based Residential Facilities (CBRFs) exclusively serving residents recovering from alcohol or drug dependency or clients of a governmental corrections agency."

It has come to our attention that in many CBRFs, the water temperatures at tubs and showers are consistently found to be above the required 110 degrees Fahrenheit. This appears to be due to the fact that mixing valves have not been routinely installed on the domestic water heaters that are being used. Facilities that have mixing valves, but which are located in areas where the water is hard, may be experiencing a lime build-up on the valves. In these cases, continuous maintenance is needed to keep the valves functioning properly.

Water that is too hot may scald individuals who are exposed to it. This danger is particularly great for the elderly and handicapped, who can have circulatory or other neurological disabilities that prevent the instantaneous recoil from too-hot water. Full-thickness scalding causes irreversible second and third degree burns in which the skin blisters and swells; it does not return to normal but forms scar tissue on healing. Full-thickness scalding occurs at the following rates at the following temperatures on normal skin, and even faster on skin that has been compromised:

110 degrees Fahrenheit	13 minutes
120 degrees Fahrenheit	10 minutes
125 degrees Fahrenheit	2 minutes
127 degrees Fahrenheit	1 minute
130 degrees Fahrenheit	30 seconds
140 degrees Fahrenheit	6 seconds
158 degrees Fahrenheit	1 second

Although the temperature at tubs and showers is to be 110 degrees Fahrenheit, section HFS 83.41(5)(d)2. requires the water temperature at the water heater to be at least 125 degrees but no more than 130 degrees. Temperatures in this range are required to prevent the growth of Legionella Bacteria, which causes Legionnaire's disease.

The temperature setting of other water heaters, such as those connected to dishwashers and clothes washing machines may exceed these temperatures. Facilities that are served entirely by one water heater may need to install a booster heater at the dishwasher or washing machine to have water that is hot enough at these points.

Licensing specialists will be checking hot water temperatures at showers and tubs to verify that they do not exceed 110 degrees Fahrenheit. They will also check the temperature at the water heater itself to verify that the water at the heater is between 125 and 130 degrees Fahrenheit. If either of these requirements are not met, they will issue a citation under section HFS 83.41(5)(d)2.

Additionally, if the water temperature at any sink that is accessible to residents is found to exceed 110 degrees Fahrenheit, a citation may be issued under section HFS 83.21(4)(w). This code states that each resident has the right

"...to live in a safe environment. The CBRF shall safe-guard residents who cannot fully guard themselves from an environmental hazard to which it is likely that they would be exposed, including both conditions which would be hazardous to anyone, and conditions which are hazardous to the resident because of the resident's condition or handicap."

If you have any questions regarding the above information, please contact the Regional Field Operations Director for your area at the telephone number listed below:

Northeastern (Green Bay) Regional Office	Pat Benesh	(920) 448-5249
Northern (Rhineland) Regional Office	Joe Bronner	(715) 365-2802
Southeastern (Milwaukee) Regional Office	Tony Oberbrunner	(414) 227-4908
Southern (Madison) Regional Office	Phyllis Tschumper	(608) 243-2374
Western (Eau Claire) Regional Office	Charlie Kirk	(715) 836-4753

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